Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1   1.   (currently amended): A system for generating a two-dimensional
2   spatial arrangement of a multi-dimensional cluster rendering, comprising:
3   a set of stored clusters from a concept space comprising a multiplicity of
4   clusters visualizing document content in a two-dimensional visual display space
5   based on extracted terms, each cluster in the clusters set sharing a common theme
6   comprising shared terms; and
7   a placement module determining an anchor point on at least one such
8   cluster within the clusters set, the anchor point comprising located on at least one
9   open edge that is formed as a point along an edge of the at least one such cluster
10   and on a vector defined from the center of the at least one such cluster; and
11   arranging the clusters in the clusters set into an arrangement of adjacent clusters
12   originating from the anchor point at one such open edge.

1   2.   (original): A system according to Claim 1, further comprising:
2   a sort module sorting the clusters in each clusters set by cluster size.

1   3.   (original): A system according to Claim 2, wherein the clusters are
2   sorted in order of one of increasing and decreasing cluster size.

1   4.   (original): A system according to Claim 1, further comprising:
2   an alignment submodule placing the clusters along a straight vector within
3   the cluster arrangement.

1   5.   (original): A system according to Claim 1, further comprising:
2   an angle submodule defining the vector for each anchor point at a
3   normalized angle.

1   6.   (currently amended): A system according to Claim 5, wherein each

2   cluster positioned at an endpoint within the cluster arrangement defines at least

3   one further anchor point than each cluster position intermediately ~~positioned~~

4   <u>between two or more endpoints within the cluster arrangement</u>.

1   7.   (original): A system according to Claim 5, wherein each

2   normalized angle is at approximately 60°.

1   8.   (original): A system according to Claim 1, further comprising:

2   a rendering module rendering each cluster as a circle having an

3   independent radius.

1   9.   (original): A system according to Claim 8, wherein each circle has

2   a volume dependent on a number of concepts contained in the cluster.

1   10.   (original): A system according to Claim 1, further comprising:

2   a rendering module rendering each cluster as a convex volume.

1   11.   (currently amended): A system according to Claim 1, wherein the

2   placement module determines a further anchor point <u>located</u> on <u>at least one</u>

3   <u>further open edge that is formed as a point along an edge of at least one further</u>

4   <u>cluster within the clusters set and on a vector defined from the center of the</u> at

5   least one [[such]] <u>further</u> cluster ~~within the clusters set~~, further comprising:

6   a grafting submodule grafting an additional arrangement originating from

7   the further anchor point at <u>the</u> one [[such]] <u>further</u> open edge.

1   12.   (currently amended): A system according to Claim 1, further

2   comprising:

3   a grouping submodule placing each cluster having a theme different than

4   the common theme<u> within the two-dimensional visual display space</u>.

1   13.   (original): A system according to Claim 1, wherein each convex

2   shape represents visualized data for a virtual semantic concept space.

1   14. (currently amended): A method for generating a two-dimensional

2 spatial arrangement of a multi-dimensional cluster rendering, comprising:

3   selecting a set of clusters from a concept space comprising a multiplicity

4 of clusters visualizing document content <u>in a two-dimensional visual display</u>

5 <u>space</u> based on extracted terms, each cluster in the clusters set sharing a common

6 theme comprising shared terms;

7   determining an anchor point on at least one such cluster within the clusters

8 set, the anchor point ~~comprising~~ <u>located on</u> at least one open edge <u>that is</u> formed

9 <u>as a point</u> along <u>an edge of the at least one such cluster and on</u> a vector defined

10 from the center of the at least one such cluster; and

11   arranging the clusters in the clusters set into an arrangement of adjacent

12 clusters originating from the anchor point at one such open edge.

1   15. (original): A method according to Claim 14, further comprising:

2   sorting the clusters in each clusters set by cluster size.

1   16. (original): A method according to Claim 15, wherein the clusters

2 are sorted in order of one of increasing and decreasing cluster size.

1   17. (original): A method according to Claim 14, further comprising:

2   placing the clusters along a straight vector within the cluster arrangement.

1   18. (original): A method according to Claim 14, further comprising:

2   defining the vector for each anchor point at a normalized angle.

1   19. (currently amended): A method according to Claim 18, wherein

2 each cluster positioned at an endpoint within the cluster arrangement defines at

3 least one further anchor point than each cluster position intermediately ~~positioned~~

4 <u>between two or more endpoints within the cluster arrangement</u>.

1   20. (original): A method according to Claim 18, wherein each

2 normalized angle is at approximately 60°.

1   21.   (original): A method according to Claim 14, further comprising:

2   rendering each cluster as a circle having an independent radius.

1   22.   (original): A method according to Claim 21, further comprising:

2   calculating a volume for each circle dependent on a number of concepts

3 contained in the cluster.

1   23.   (original): A method according to Claim 14, further comprising:

2   rendering each cluster as a convex volume.

1   24.   (currently amended): A method according to Claim 14, further

2 comprising:

3   determining a further anchor point located on at least one further open

4 edge that is formed as a point along an edge of at least one further cluster within

5 the clusters set and on a vector defined from the center of the at least one [[such]]

6 further cluster within the clusters set; and

7   grafting an additional arrangement originating from the further anchor

8 point at the one [[such]] further open edge.

1   25.   (currently amended): A method according to Claim 14, further

2 comprising:

3   placing each cluster having a theme different than the common theme

4 within the two-dimensional visual display space.

1   26.   (original): A method according to Claim 14, wherein each convex

2 shape represents visualized data for a virtual semantic concept space.

1   27.   (currently amended): A computer-readable storage medium

2 holding storing code for causing a computer to perform performing the method

3 according to Claims 14, 15, 17, 18, 21, 23, 24, 25 and 26.

1   28.   (currently amended): A system for arranging concept clusters in

2 thematic relationship in a two-dimensional visual display space, comprising:

3   a plurality of stored clusters selected from <u>a two-dimensional visual</u>

4 <u>display space representing</u> a multi-dimensional visualization space sharing a

5 common theme comprising at least one concept, each theme logically

6 representing one or more concepts based on terms extracted from a document set;

7 <u>and</u>

8   a placement module combining in order each cluster not yet grouped from

9 the selected clusters for the shared common theme into a list of placeable clusters;

10 and grafting each clusters list into a grouping of one or more other clusters lists at

11 an anchor point ~~comprising~~ <u>located on</u> an open edge formed <u>as a point</u> along <u>an</u>

12 <u>edge of one such cluster in the grouping and on</u> a vector defined from the center

13 of <u>the</u> one such cluster ~~in the grouping~~, the clusters in each other clusters list

14 sharing at least one concept represented in the shared common theme.

1   29.   (original): A system according to Claim 28, further comprising:

2   a sort module sorting the clusters in each clusters list in sequence.

1   30.   (original): A system according to Claim 29, wherein the sequence

2 comprises a number of documents containing the one or more logically

3 represented concepts.

1   31.   (original): A system according to Claim 29, wherein the sequence

2 comprises one of ascending and descending order.

1   32.   (original): A system according to Claim 28, wherein each cluster is

2 formed as one of a circular and non-circular convex volume.

1   33.   (original): A system according to Claim 28, wherein the vector for

2 each cluster is defined at normalized angles.

1   34.   (original): A system according to Claim 28, further comprising:

2   a display and visualize module generating a visual display space

3 containing the groupings of clusters lists.

1   35.   (original): A system according to Claim 28, wherein the theme

2 contains concepts within a pre-specified range of variance.

1   36.   (currently amended): A method for arranging concept clusters in

2 thematic relationship in a two-dimensional visual display space, comprising:

3   selecting clusters from <u>a two-dimensional visual display space</u>

4 <u>representing</u> a multi-dimensional visualization space sharing a common theme

5 comprising at least one concept, each theme logically representing one or more

6 concepts based on terms extracted from a document set;

7   combining in order each cluster not yet grouped from the selected clusters

8 for the shared common theme into a list of placeable clusters; and

9   grafting each clusters list into a grouping of one or more other clusters

10 lists at an anchor point ~~comprising~~ <u>located on</u> an open edge formed <u>as a point</u>

11 along <u>an edge of one such cluster in the grouping and on</u> a vector defined from the

12 center of <u>the</u> one such cluster ~~in the grouping~~, the clusters in each other clusters

13 list sharing at least one concept represented in the shared common theme.

1   37.   (original): A method according to Claim 36, further comprising:

2   sorting the clusters in each clusters list in sequence.

1   38.   (original): A method according to Claim 37, wherein the sequence

2 comprises a number of documents containing the one or more logically

3 represented concepts.

1   39.   (original): A method according to Claim 37, wherein the sequence

2 comprises one of ascending and descending order.

1   40.   (original): A method according to Claim 36, further comprising:

2   forming each cluster as one of a circular and non-circular convex volume.

1   41.   (original): A method according to Claim 36, further comprising:

2   defining the vector for each cluster at normalized angles.

1   42.   (original): A method according to Claim 36, further comprising:

2   generating a visual display space containing the groupings of clusters lists.

1   43.   (original): A method according to Claim 36, wherein the theme

2   contains concepts within a pre-specified range of variance.

1   44.   (currently amended): A computer-readable storage medium

2   ~~holding~~ <u>storing</u> code for <u>causing a computer to perform</u> ~~performing~~ the method

3   according to Claims 36, 37, 38, 39, 40, 41, 42, and 43.